Gitlab的概念

GitLab 是一个用于仓库管理系统的开源项目，使用Git作为代码管理工具，并在此基础上搭建起来的Web服务。

安装方法是参考GitLab在GitHub上的Wiki页面。

Gitlab是目前被广泛使用的基于git的开源代码管理平台，基于Ruby on Rails构建，主要针对软件开发过程中产生的代码和文档进行管理，Gitlab主要针对group和project两个维度进行代码和文档管理，其中group是群组，project是工程项目，一个group可以管理多个project，可以理解为一个群组中有多项软件开发任务，而一个project中可能包含多个branch，意为每个项目中有多个分支，分支间相互独立，不同分支可以进行归并。

用到的git指令

```
git init ：初始化.git文件夹
git add 文件名：从本地工作区添加文件入暂存区
git add -A：从本地工作区添加全部文件入暂存区
git commit -m “添加的备注” 文件名：暂存区给文件备注确认，记录为一个版本
git commit -m “添加的备注” 文件名：暂存区全部文件备注确认，记录为一个版本
git log：查看历史版本记录
git status：查看文档修改记录，红色为未add内容，绿色为可以commit内容
git push 地址名 本地分支:远程库分支：将暂存区代码推入远程库
git remove add 地址名 地址url：远程库操作
git branch -M 分支名：创建分支
```

gitlab的安装与配置

gitlab-ce.repo源包

```
vim /etc/yum.repos.d/gitlab-ce.repo
[gitlab-ce]
name=Gitlab CE Repository
baseurl=
https://mirrors.tuna.tsinghua.edu.cn/gitlab-ce/yum/el
baseurl=
gpgcheck=0
enabled=1
```

```
#yum makecache
```

或者这样装wget安装

```
wget https://mirrors.tuna.tsinghua.edu.cn/gitlab-ce/yum/el7/gitlab-ce-15.2.2-ce.0.el7.x86_64.rpm
wget
```

改主机域名

```
[root@localhost ~]# hostnamectl set-hostname gitlab.example.com[root@localhost ~]# bash[root@gitlab ~]#
```

配置 hosts

```
[root@gitlab ~]# cat /etc/hosts192.168.100.17   gitlab.example.com
```

安装gitlab依赖软件 及获取 GPG 密钥

```
yum install -y curl policycoreutils openssh-server openssh-clients postfix
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
```

安装 postfix 并启动

```
yum install postfixsystemctl start postfixsystemctl enable  postfix
```

安装gitlab-ce

```
curl -sS https://packages.gitlab.com/install/repositories/gitlab/gitlab-ce/script.rpm.sh
curl -sS
```

手动配置ssl证书

1.创建私有密钥

```
[root@gitlab ~]# mkdir -p /etc/gitlab/ssl
[root@gitlab ~]# openssl genrsa -out "/etc/gitlab/ssl/gitlab.example.com.key" 2048
Generating RSA private key, 2048 bit long modulus
...+++
.......................................+++
e is 65537 (0x10001)
```

2.创建私有证书

```
[root@gitlab ~]# cd /etc/gitlab/ssl
[root@gitlab ssl]# ls
gitlab.example.com.key
[root@gitlab ssl]# openssl req -new -key "/etc/gitlab/ssl/gitlab.example.com.key" -out
"/etc/gitlab/ssl/gitlab.example.com.csr"
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
Country Name (2 letter code) [XX]:CN          CN  ##国家
State or Province Name (full name) []:SX      SX   ##省份
Locality Name (eg, city) [Default City]:XA    XA   ##城市
Organization Name (eg, company) [Default Company Ltd]:    ##空格
Organizational Unit Name (eg, section) []:                ##空格
Common Name (eg, your name or your server's hostname) []:gitlab.example.com
Email Address []:123456@qq.com                 ##邮箱地址
Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:123456                ## 密码
An optional company name []:                  ##空格
[root@gitlab ssl]# ls
gitlab.example.com.csr  gitlab.example.com.key
```

3.创建CRT签署证书

安装完成，创建好了ssl密钥和证书

在ssl目录下ll

可以看到ssl密钥和证书

利用ssl密钥和证书创建签署证书

```
[root@gitlab ssl]# openssl x509 -req -days 365 -in "/etc/gitlab/ssl/gitlab.example.com.csr" -signkey "/etc/gitlab/ssl/gitlab.example.com.key" -out "/etc/gitlab/ssl/gitlab.example.com.crt"
Signature ok
subject=/C=CN/ST=SX/L=XA/O=Default Company Ltd/CN=gitlab.example.com/emailAddress=123456@qq.com
Getting Private key
[root@gitlab ssl]# ll /etc/gitlab/ssl/
总用量 12
-rw------- 1 root root 1273 8月   8 15:52 gitlab.example.com.crt
-rw------- 1 root root 1070 8月   8 15:52 gitlab.example.com.csr
-rw------- 1 root root 1679 8月   8 15:50 gitlab.example.com.key
```

4.利用openssl签署pem 证书

```
root@gitlab ssl]# openssl x509 -req -days 365 -in "/etc/gitlab/ssl/gitlab.example.com.csr" -signkey "/etc/gitlab/ssl/gitlab.example.com.key" -out "/etc/gitlab/ssl/gitlab.example.com.crt"
Signature ok
subject=/C=CN/ST=SX/L=XA/O=Default Company Ltd/CN=gitlab.example.com/emailAddress=123456@qq.com
Getting Private key
[root@gitlab ssl]#
[root@gitlab ssl]# openssl dhparam -out /etc/gitlab/ssl/dhparams.pem  2048
Generating DH parameters, 2048 bit long safe prime, generator 2
This is going to take a long time
.............................+.....................................................
.....................................................................................
.....................................................................+.+.....
.....................................................+...............................
.....................................................................................
..................+..................................................................
.....................................................................................
.....................................................................................
.........+...........................................................................
.........+.....................................
```

5.更改ssl下的所有证书权限

```
[root@gitlab ssl]# chmod 600 *
[root@gitlab ssl]# ll
总用量 16
-rw------- 1 root root  424 8月   8 15:53 dhparams.pem
-rw------- 1 root root 1273 8月   8 15:52 gitlab.example.com.crt
-rw------- 1 root root 1070 8月   8 15:52 gitlab.example.com.csr
-rw------- 1 root root 1679 8月   8 15:50 gitlab.example.com.key
```

6.配置证书到gitlab配置文件中

```
[root@gitlab ssl]# vim /etc/gitlab/gitlab.rb
external_url 'https://gitlab.example.com'      ###改为https开头
nginx['redirect_http_to_https'] = true           ###取消#号更改注释并为true  1397行
# nginx['ssl_certificate'] = "/etc/gitlab/ssl/gitlab.example.com.crt"      ###更改路径
# nginx['ssl_certificate_key'] = "/etc/gitlab/ssl/gitlab.example.com.key"      ###更改路径
# nginx['ssl_dhparam'] = "/etc/gitlab/ssl/dhparams.pem"    ##更改路径###    # Path to dhparams.pem, eg.  /etc/gitlab/ssl/dhparams.pem
```

7.更改完之后初始化命令执行

```
[root@gitlab ssl]# gitlab-ctl reconfigure
....
....
....
Running handlers:
[2022-08-09T15:04:10+08:00] INFO: Running report handlers
Running handlers complete
[2022-08-09T15:04:10+08:00] INFO: Report handlers complete
Infra Phase complete, 3/818 resources updated in 13 seconds
gitlab Reconfigured!
# 出现这个表示配置没有问题!

[root@gitlab ssl]# gitlab-ctl status
```

```
[root@gitlab ssl]#gitlab-ctl restart
ok: run: alertmanager: (pid 16197) 0s
ok: run: gitaly: (pid 16212) 0s
ok: run: gitlab-exporter: (pid 16225) 0s
ok: run: gitlab-kas: (pid 16227) 0s
ok: run: gitlab-workhorse: (pid 16236) 1s
ok: run: grafana: (pid 16243) 0s
ok: run: logrotate: (pid 16253) 1s
ok: run: nginx: (pid 16260) 0s
ok: run: node-exporter: (pid 16269) 1s
ok: run: postgres-exporter: (pid 16281) 0s
ok: run: postgresql: (pid 16371) 0s
ok: run: prometheus: (pid 16384) 1s
ok: run: puma: (pid 16399) 0s
ok: run: redis: (pid 16405) 1s
ok: run: redis-exporter: (pid 16411) 0s
ok: run: sidekiq: (pid 16419) 0s
[root@gitlab conf]#
[root@gitlab conf]#  gitlab-ctl restart sidekiq
ok: run: sidekiq: (pid 17327) 0s
```

8.对nginx配置

```
[root@gitlab ssl]#cd /var/opt/gitlab/nginx/conf
[root@gitlab conf]# ls
gitlab-health.conf  gitlab-http.conf  nginx.conf  nginx-status.conf
[root@gitlab conf]# vim gitlab-http.conf
server_name gitlab.example.com;
rewrite ^(.*)$ https://$host$1 permanent;       ####需要添加的配置 注：（配置在80端口）
```

9.重启gitlab

```

[root@gitlab ssl]#  gitlab-ctl restart
ok: run: alertmanager: (pid 15710) 0s
ok: run: gitaly: (pid 15723) 1s
ok: run: gitlab-exporter: (pid 15736) 0s
```

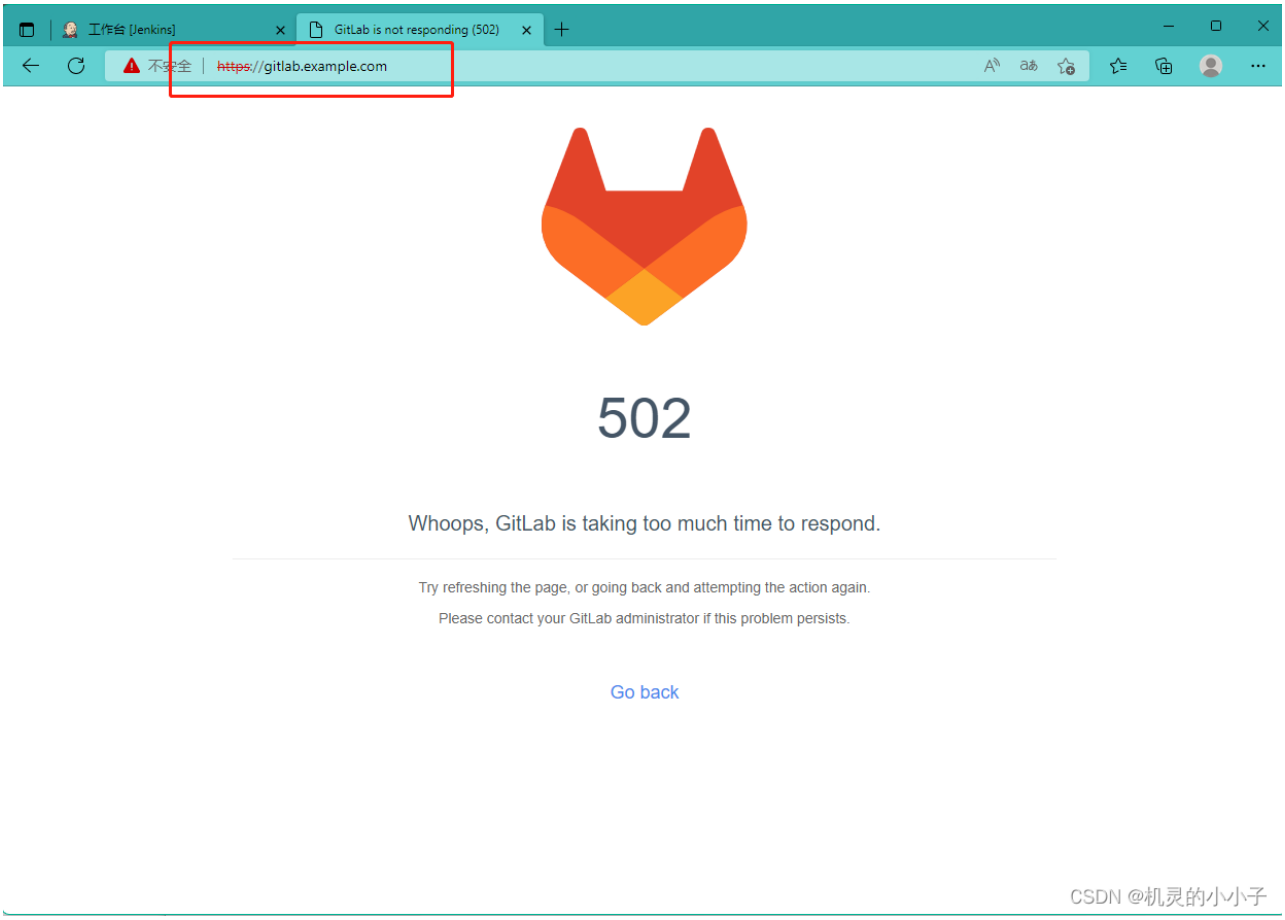
```
ok: run: gitlab-kas: (pid 15738) 0s
ok: run: gitlab-workhorse: (pid 15747) 1s
ok: run: grafana: (pid 15755) 0s
ok: run: logrotate: (pid 15765) 1s
ok: run: nginx: (pid 15775) 0s
ok: run: node-exporter: (pid 15781) 1s
ok: run: postgres-exporter: (pid 15792) 0s
ok: run: postgresql: (pid 15800) 0s
ok: run: prometheus: (pid 15803) 0s
ok: run: puma: (pid 15895) 0s
ok: run: redis: (pid 15904) 1s
ok: run: redis-exporter: (pid 15910) 0s
ok: run: sidekiq: (pid 15918) 0s
```

在Windows系统里C:\Windows\System32\drivers\etc\hosts 添加以下

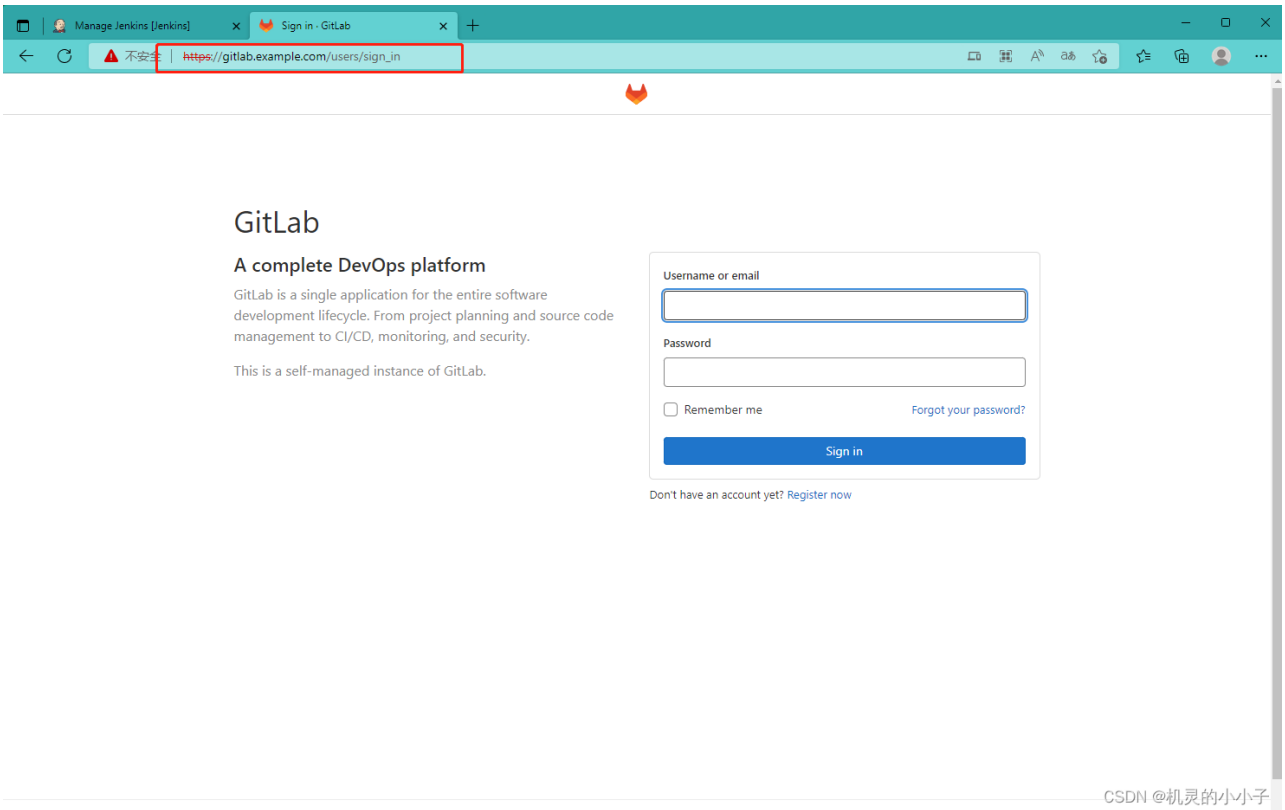
```
192.168.100.17        gitlab.example.com
```

然后ping gitlab.example.com　是否能通

浏览器登录 gitlab　机器配置要大于4g内存，否则很容易启动不了，报502



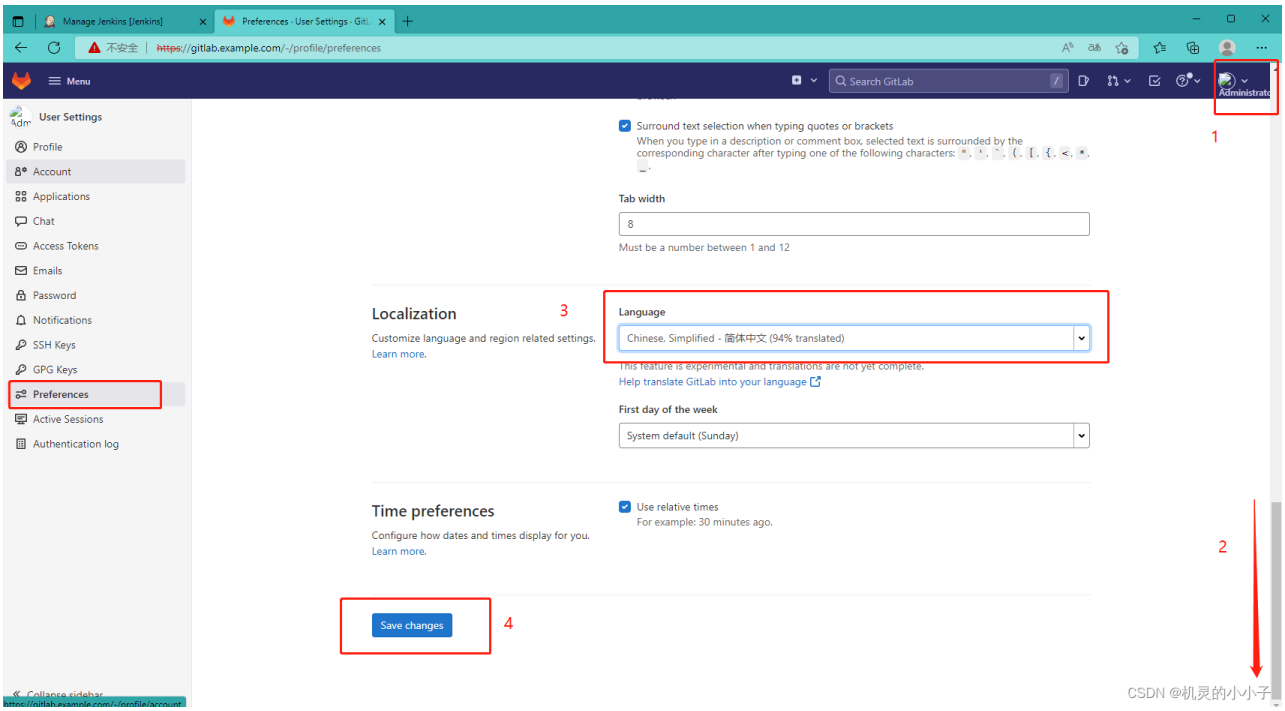
浏览器登录 gitlab https://gitlab.example.com/



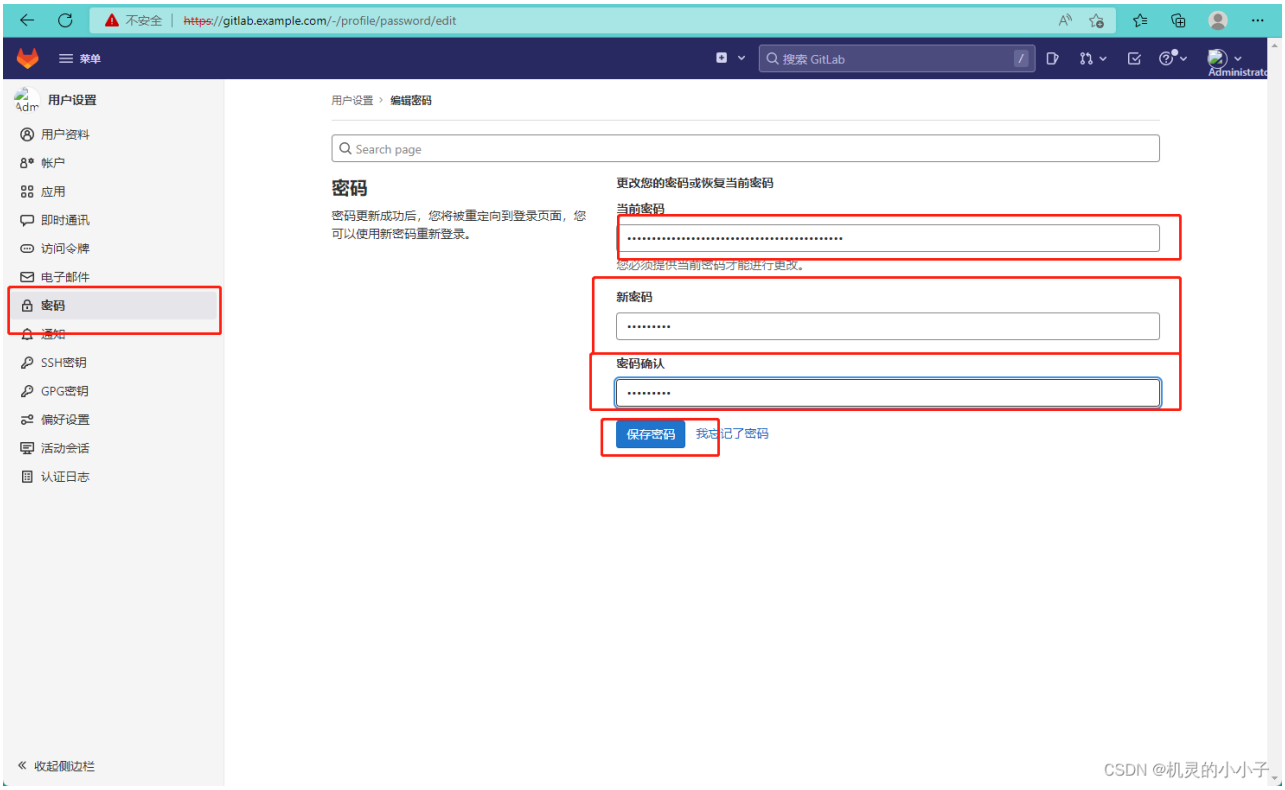
查看初始密码

```
[root@gitlab ~]# cat /etc/gitlab/initial_root_password
# WARNING: This value is valid only in the following conditions
#          1. If provided manually (either via `GITLAB_ROOT_PASSWORD` environment variable or via `gitlab_rails['initial_root_password']` setting in `gitlab.rb`, it was provided before database was seeded for the first time (usually, the first reconfigure run).
#          2. Password hasn't been changed manually, either via UI or via command line.
#
#          If the password shown here doesn't work, you must reset the admin password following https://docs.gitlab.com/ee/security/reset_user_password.html#reset-your-root-password.

Password: hms9K6+y9yBlIj1UgLcjmbQ5c1mFF/EHMaFQALPjNHQ=          ##为初始密码

# NOTE: This file will be automatically deleted in the first reconfigure run after 24 hours.
[root@gitlab ~]#
```

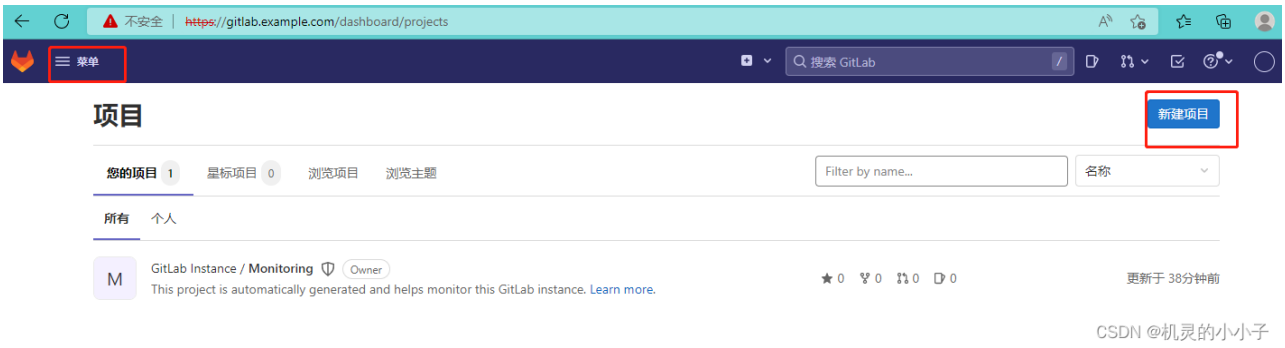
gitlab切换中文模式



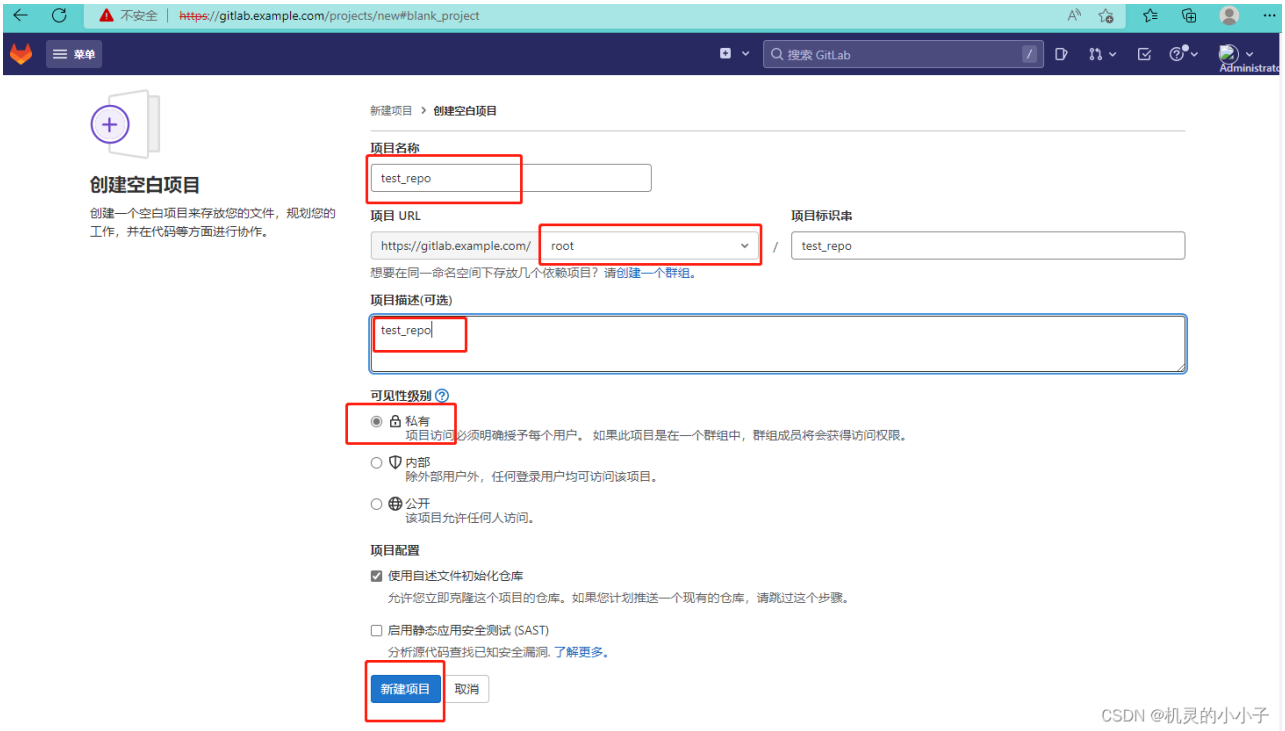
更改初始密码



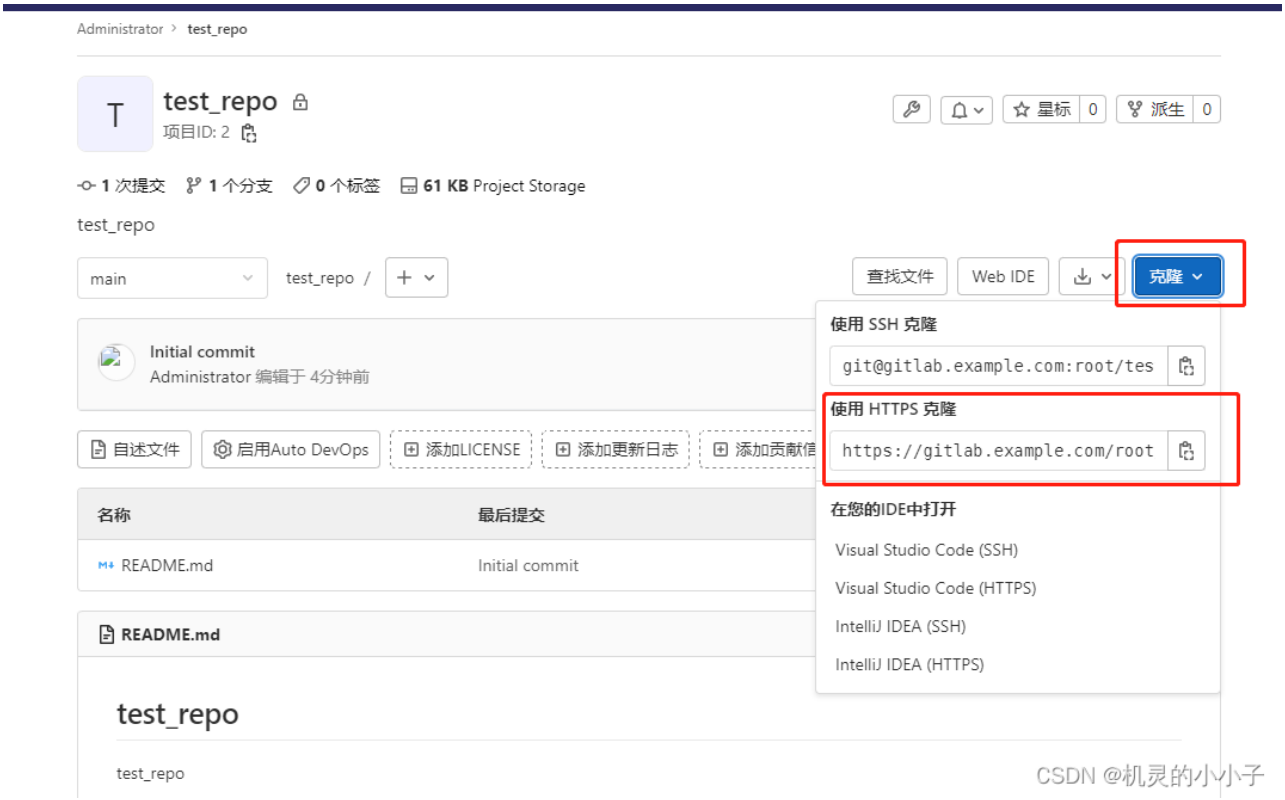
开始使用gitlab创建项目



1、创建一个测试项目



2，复制仓库地址



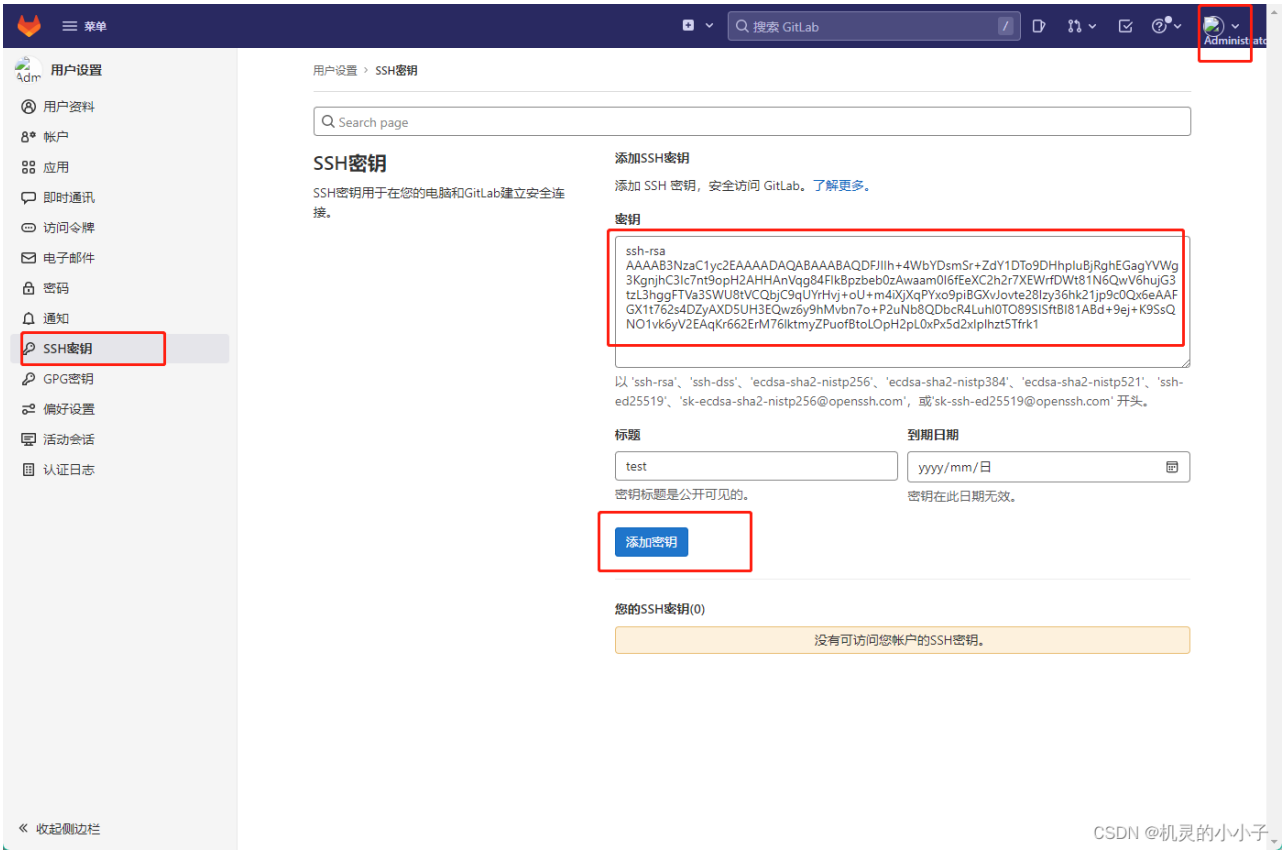
生成公钥私钥对出来，命令：ssh-keygen

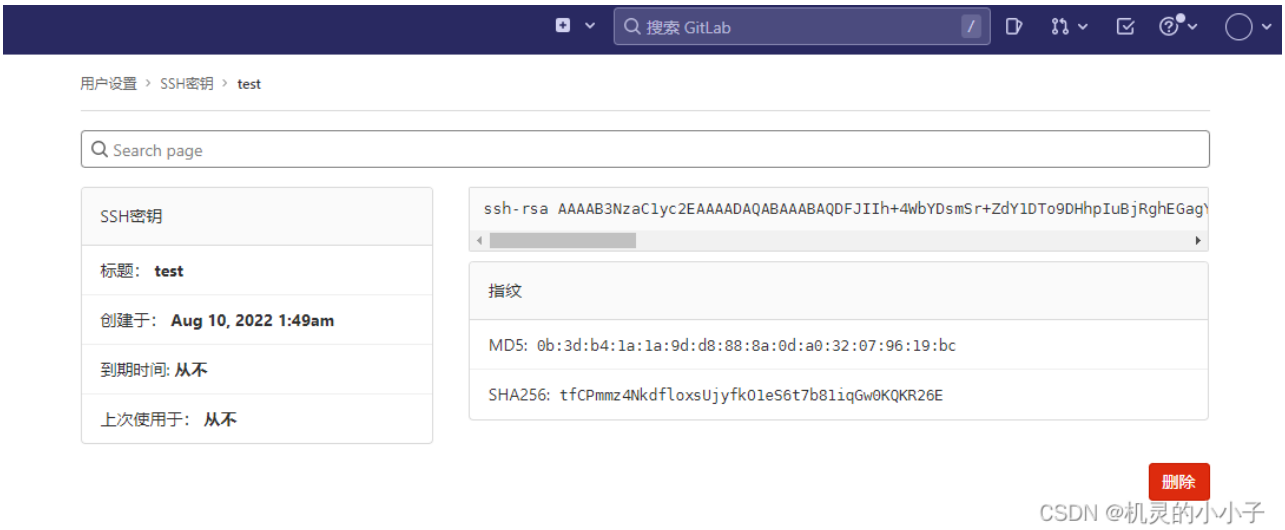
进入密钥目录：cd .ssh/

```
[root@gitlab ~]# ssh-keygen
Generating public/private rsa key pair.
```

```
Enter file in which to save the key (/root/.ssh/id_rsa):
Created directory '/root/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:tfCPmmz4NkdfloxsUjyfkO1eS6t7b81iqGw0KQKR26E root@gitlab.example.com
The key's randomart image is:
+---[RSA 2048]----+
|     .           |
|    o .          |
|     = .. .. o   |
|    E .  + .* .  |
|     .  S o+ B o |
|      . . *o+ O..|
|       o +.=.=.o+|
|      ..++o o +++|
|       +=+o. ++oo|
+----[SHA256]-----+
[root@gitlab ~]# cd .ssh/
[root@gitlab .ssh]# ll
总用量 8
-rw------- 1 root root 1675 8月  10 09:44 id_rsa
-rw-r--r-- 1 root root  405 8月  10 09:44 id_rsa.pub
[root@gitlab .ssh]# cat id_rsa.pub
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDFJIIh+4WbYDsmSr+ZdY1DTo9DHhpIuBjRghEGagYVWg3KgnjhC3Ic7nt
9opH2AHHAnVqg84FIkBpzbeb0zAwaam0I6fEeXC2h2r7XEWrfDWt81N6QwV6hujG3tzL3hggFTVa3SWU8tVCQbj
C9qUYrHvj+oU+m4iXjXqPYxo9piBGXvJovte28Izy36hk21jp9c0Qx6eAAFGX1t762s4DZyAXD5UH3EQwz6y9hM
vbn7o+P2uNb8QDbcR4Luhl0TO89SISftBI81ABd+9ej+K9SsQNO1vk6yV2EAqKr662ErM76lktmyZPuofBtoLOp
H2pL0xPx5d2xIplhzt5Tfrk1 root@gitlab.example.com
[root@gitlab .ssh]#
```

新建一个SSH密钥





原文链接：https://blog.csdn.net/qq_15290209/article/details/126230624